BGE

BUNDESGESELLSCHAFT
FÜR ENDLAGERUNG

Annual Report 2020

Title: Asse mine,
Driving cavern section, 825 m level

Dear employees …

… the past business year was a special one in the light of the COVID-19 pandemic – it posed big and unfamiliar challenges to all of us, both professionally and personally. By pulling together organisationally and technically, we were able to respond quickly to this health-threatening situation. The most important message is that all of our colleagues who caught the coronavirus have since recovered.

The direct and indirect measures associated with this pandemic have, of course, also had a noticeable impact on our company's success. Coming out of this crisis, we have to do all we can, in a joint effort, to make up for it. But we have already learned a lot. We have learnt to be considerate, to look after each other, and to stand up for each other; and we have learnt new ways of going about our business, with things like extensive mobile working, the introduction of air purifiers, or the installation of spit barriers.

At the same time, BGE has made progress with its documentation: examples include publishing the Sub-Areas Interim Report or commencing the licensing process for retrieval of the waste in Asse.

We know that it has taken great effort on your part to get through this situation under these conditions. We very much hope that we can soon put this pandemic behind us. But it is also clear to us that many of the changes we have made in the past months are going to stay with us as new work norms of the future. So, let's use the positive experiences to make BGE better – and let's look forward together!

Thank you all for your commitment and loyalty.

Glück auf!
The management board

Konrad mine: Looking towards the washing bay

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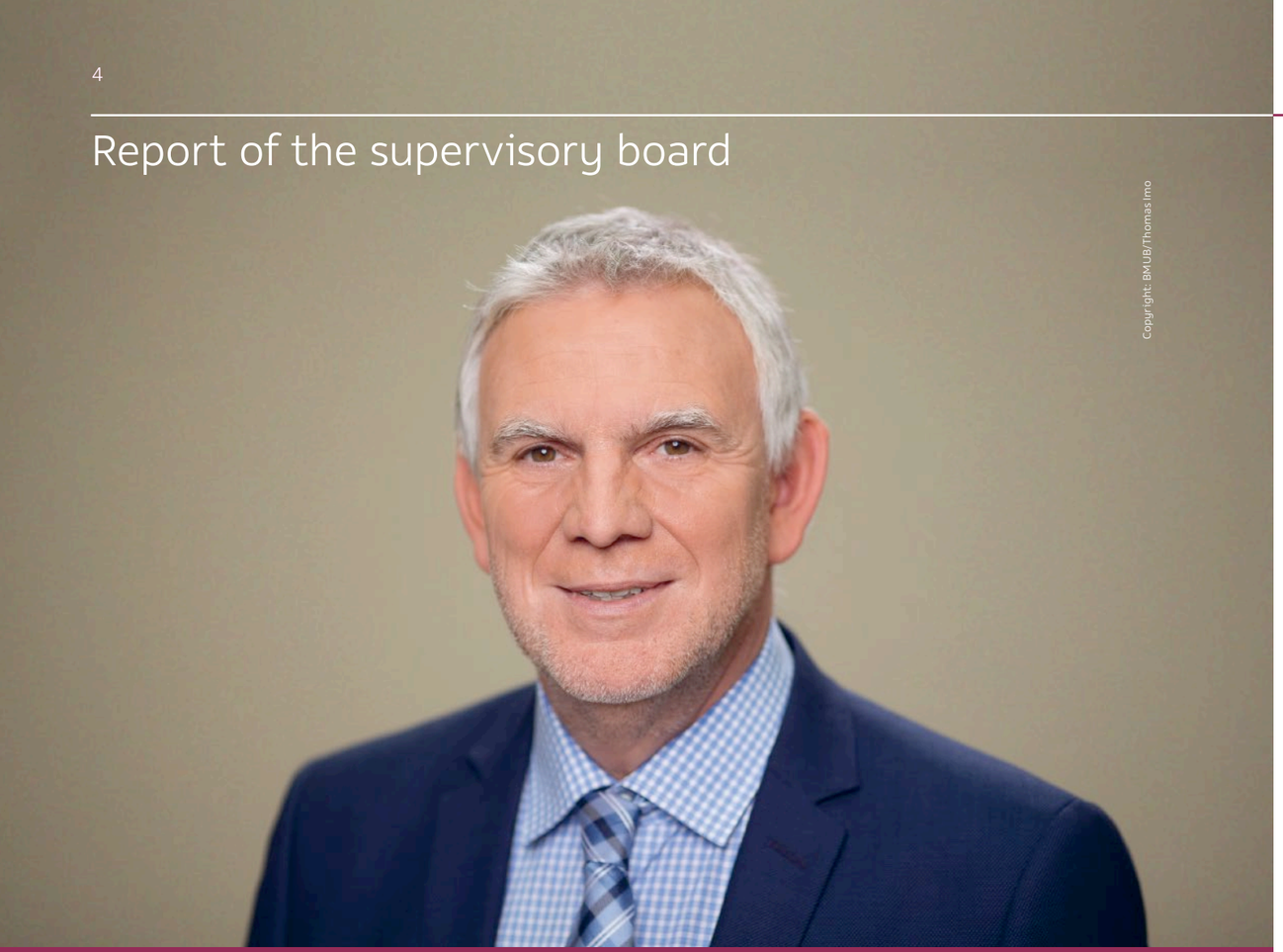
Report of the supervisory board



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In 2020, the management board informed the BGE supervisory board orally and in writing about all essential business transactions of BGE.

In two meetings, the supervisory board discussed business developments and important individual events, and dealt with the transactions presented for examination and approval as required by law and the articles of association.

Owing to the COVID-19 pandemic, the supervisory board met exclusively in digital format in 2020. In a meeting on 18 June 2020, among other things, the supervisory board accepted the financial statement for 2019, informed the general assembly in writing of its appraisal, and proposed its approval. Also presented and discussed were the annual report on the internal audit for 2019 and BGE's first Equalisation Plan for the period 2020 to 2023.

In its subsequent meeting on 25 November 2020, the supervisory board proposed to the shareholders' meeting that the auditing / tax consulting firm Ebner Stolz GmbH & Co KG be appointed for auditing the 2020 annual financial statements, and defined two focal points for the audit.

The supervisory board expresses its thanks and appreciation to the management board and all BGE employees for their performance in 2020.

Peine, 30 June 2021
Jochen Flasbarth

Chairman of the Supervisory Board

Members

Jochen Flasbarth
State Secretary, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Chairman)

Gregor van Beesel
BGE (Employee Representative, Deputy Chairman)

Dirk Alvermann
BGE (Employee Representative)

Ursula Borak
Deputy Director-General, Federal Ministry for Economic Affairs and Energy

Dr. Wolfgang Cloosters
Head of Directorate-General, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Sabine Diehr
Head of Division, Federal Ministry of Education and Research

Leonie Gebers
State Secretary, Federal Ministry of Labour and Social Affairs

Prof. Dr. Karin Holm-Müller
Professor of Resource and Environmental Economics, University of Bonn

Franz-Gerhard Hörnschemeyer
Industry Group Secretary for Energy Sustainability at the Mining, Chemical and Energy Industries Union

Dr. Holle Jakob
Head of Division, Federal Ministry of Finance

Dr. Andreas Kerst
Head of Division, Federal Ministry of Finance

Sylvia Kotting-Uhl
Member of the Bundestag and Chair of the Committee for the Environment, Nature Conservation and Nuclear Safety

Jens Lindner
BGE (Employee Representative)

Gabriele Theisen
BGE (Employee Representative)

Peter Wolff
BGE (Employee Representative)

How BGE wants to communicate, or Transparency comes first

Communication is an integral and essential component of what we do at BGE. We have therefore decided to make communication a point of focus in and of itself. Of course we like to talk about our successes; but it is at least as important for us to talk openly about the things that didn't go so well or even went badly.

We are continually communicating about how our projects are progressing and what that means for everybody concerned. We keep in communication with the general public, with politicians and, of course, with our employees. Because no matter where they are – at the head office, in the mines, or in the home office – I feel it is important, especially in these difficult times, for everyone to be included. One of our latest goals is to introduce an employee app to make it even easier to keep the dialogue going and up to date.

With our BGE communication guidelines, we want to establish an attitude of open communication internally and externally to BGE, and thereby help to increase the acceptance of our projects. If we want to carry out our projects, we need credibility and have to repeatedly earn the trust of stakeholders and the public through transparency and approachability. This includes meeting people at eye level wherever possible.

People's unease at the thought of living near a repository is understandable and deserves to be taken seriously. It is a simple fact that there is an emotional side to the issues that BGE deals with. We have to respond to this with authenticity and empathy. We cannot alleviate people's fears by simply reiterating that they have nothing to fear. Therefore, we always try to understand the causes of their fears and address them directly.

BGE explains its projects and challenges objectively and puts its topics out there for public discussion.

It does not "refute" the arguments of its critics, but instead presents its own standpoint. It enters into dialogue with the people. BGE has a social and environmental mandate, which it wants to solve together with as many people as possible.

Communicating with one-sided arrogance and self-righteousness or the wish to be right all the time does not help here – that's not who we are.

BGE makes no distinction between internal and external communication. With more than 2000 employees, internal information is always external information. Therefore, the staff and the public remain equally informed of important developments or issues as they arise.

Internally, it is essential to help our colleagues along this often rocky path of informing and opinion-forming. Helping them to understand social resistance is just as important as giving them arguments so that they can actively contribute to the public discussion on our and their own behalf.

A key component of our communication guidelines is that we publish the essential documents from all projects whether there is a legal obligation to or not. With each project area, we develop and continuously update a communication concept. Likewise, we are constantly developing our means of communication and embracing new technologies.

The following also applies for the future: BGE seeks dialogue with you. So, please, join in and challenge us!

Stefan Studt,
Chairman of the Management Board

Guidelines for communication

BGE communicates on a high technical level transparently, comprehensively, understandably, and continuously.

BGE uses dialogue to inform, to listen, to accept criticism, and to learn continuously. The attitude towards communication is respectful. BGE makes decisions responsibly and stands by its decisions.

BGE is aware of the emotional side of its topics and responds with empathy in discussions, which can be driven by emotion.

BGE is in direct dialogue with its stakeholders (licensing authorities, shareholder, supervisory board, politicians, associations, citizens' initiatives, residents of the project regions).

BGE follows the same principles of communication internally and externally, and knows the connections between the two spheres.

Everything must be traceable and verifiable – data transparency in the site selection procedure

The site search for a high-level radioactive waste repository needs the broadest possible acceptance among the population. For residents, members of parliament and citizens' initiatives alike, BGE's proposals must be comprehensible and verifiable for everyone – even if that means a decision could ultimately be criticised or even rejected. This can only be achieved if there is consistent transparency throughout all stages. Geological data relevant to the site selection decision process must be understandably prepared and published. "And not just select portions of data, but as much as possible – even if this involves a great effort for us," says Dagmar Dehmer, BGE Manager of Corporate Communication, summing up the attitude of BGE.

Geodata comes in different forms

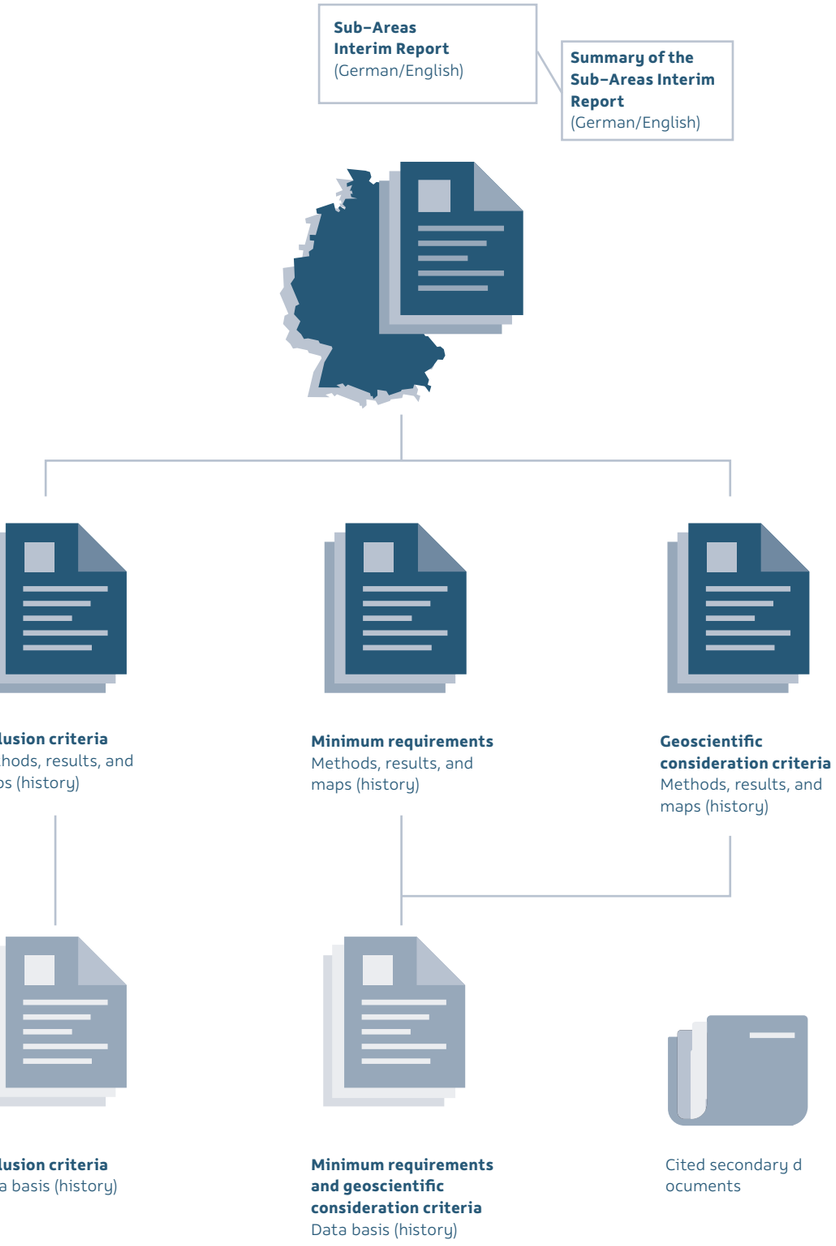
There are plenty of challenges. In the first phase of site selection, in particular, when BGE has still conducted no surveys of its own, BGE has to work with geodata that do not belong to it. BGE has been requesting, preparing, and evaluating such data from the state and federal authorities since 2017. The Sub-Areas Interim Report, published on 28 September 2020, has an accordingly highly diverse data basis, with information on boreholes (e.g. strata inventories), tectonic and palaeogeographic map series, mine plans, geological 3D models, and other information from federal and state authorities as well as from technical literature. Some of this data only existed in analogue form and had to be digitised first. Some data had been obtained by the state and were openly accessible. Yet other data had been obtained by private companies at high financial cost, mostly relating to the extraction of raw materials.

BGE was able to work well with all this data, and published the Sub-Areas Interim Report on time. However, BGE is still not at liberty to make all data publicly available to everyone without going through extra motions.

The Geological Data Act regulates the publication of data

A major boost to transparency came with the Geological Data Act, which was passed on 30 June 2020. This law distinguishes geological data into the classes of: detection data, such as drilling points; technical data, which provide greater detail about the geology; and assessment data, into which a lot of technical expertise has already gone. The law treats these data categories differently when it comes to their publication. For decision-relevant geological data, BGE makes categorisation proposals to the competent authorities at federal and state level. These proposals can then be confirmed or modified by the authorities. Things are more complicated for data that cannot be published merely after waiting out certain deadlines or due to their categorisation: in those cases, public interest in the transparency of the site selection procedure must be weighed against the legally protected private interest in secrecy. In each individual case, the data owners must be consulted. Therefore, there can be extremely long delays before some data are published. There may even be some that will never be published at all, although the experts at BGE do not expect that to be the case for very much data.

What the guide through the documents looks like on BGE's website.



Everything must be traceable and verifiable – data transparency in the site selection procedure

Crystalline rock

Rock salt

Clay rock

A "data room" for the time being

There is an interim solution for data that cannot be published (yet): the National Citizens' Oversight Committee, which is overseeing the site selection procedure, can enlist scientific experts to audit currently unpublishable data that is relevant to the decision process. For this purpose, the Committee can commission up to five external experts to inspect the data. BGE has set up a separate data room with all geological data for this purpose. With their expertise, the commissioned experts provide the National Citizens' Oversight Committee with opinions on whether these data have been correctly evaluated and duly considered in the site selection procedure.

How BGE publishes and communicates data

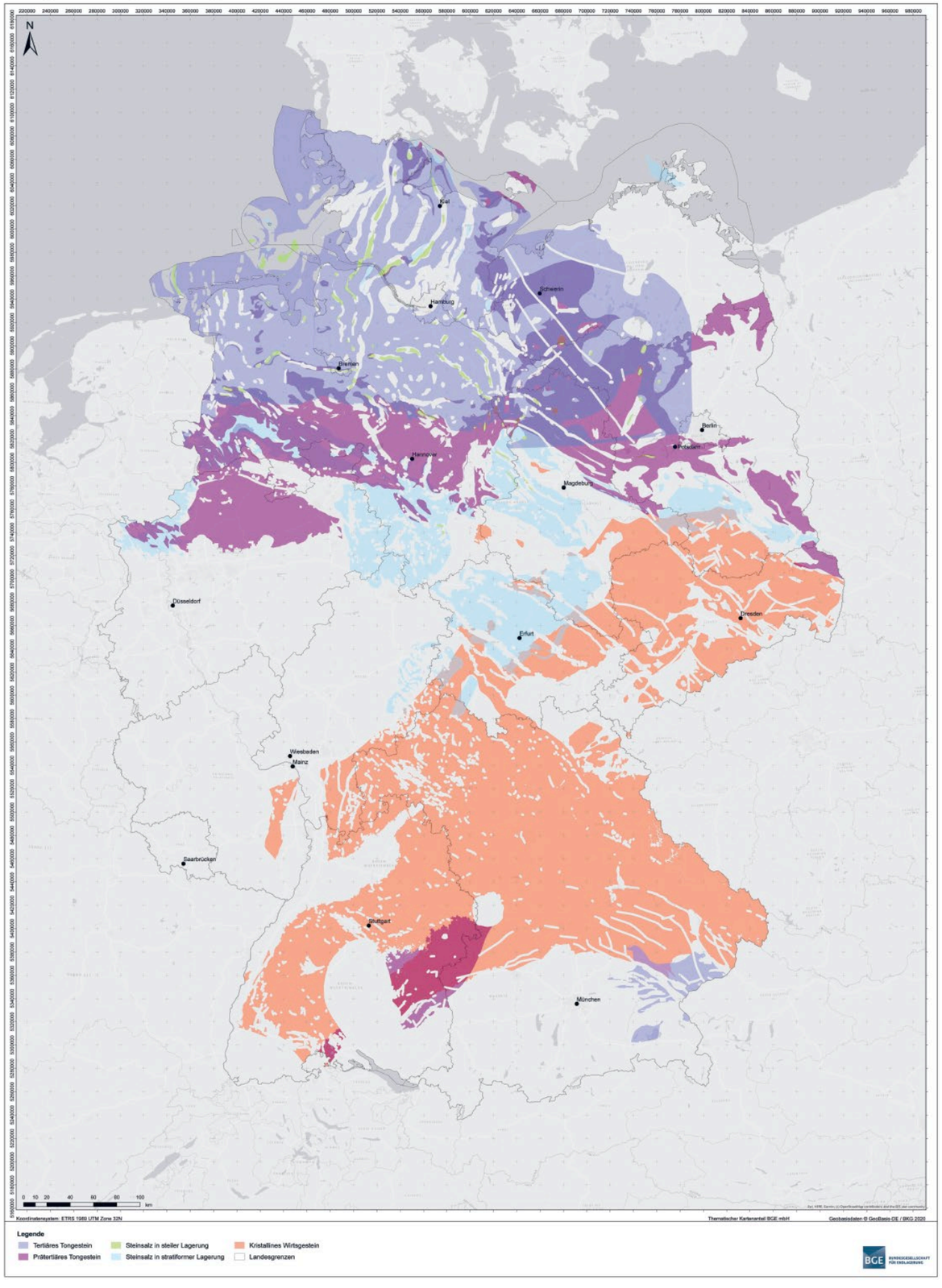
The reason for publishing data openly is to help clarify, and not to confuse. Data must therefore be prepared in a way that makes them understandable. This important task is done at BGE by the team led by Dr. Sönke Reiche, Head of the Site Search Department. The scientists in this team prepare maps, files, geomodels, and data reports specifically for publication. The centrepiece of this work is the interactive map of the sub-areas on BGE's website. This was published at the same time as the Interim Report and has since been expanded with additional functions. In addition to a postcode search for quick access, individual sub-areas and exclusion areas can now also be selected. The 90 sub-area pages and short profiles, with all relevant information on each respective sub-area, can also be accessed via the interactive map with just a few clicks.

This takes away the need for laborious searching through extensive documentation for each and every sub-area. BGE has thus responded to demand from the interested (expert) public and will continue supplementing the map with relevant information.

Data reports are also constantly being supplemented and published on the BGE website as appendices to the Sub-Areas Interim Report. At present, these still contain redacted pages. Whenever a new series of data becomes publishable, the reports are expanded to include the newly released data. Old versions of the reports remain online so that updates can be tracked. A signpost (see figure on page 11) makes it easier to navigate through all the documents on the website.

BGE has also made the federal states' 3D models that were used for the Sub-Areas Interim Report – 21 in total – accessible via a 3D viewer. Those who have a GIS system can download shape files to see these models for themselves. BGE will continue to develop its website to keep things clear despite the increasing amount of data. Plans include a search function and a revision of the sections for essential documents. Here too, BGE is always open to suggestions. In line with the learning process for site selection, the motto is: we want to keep getting better! (sp)

Sub-areas as identified in § 13 of the Site Selection Act



Guest article by Dr. Jan-Hendrik Kamlage

Transparency requirements for the participatory repository site search – between effective and full transparency. A democratic theory classification

The debate and demand for transparency is as old as the long and conflict-ridden search for a final repository site. Critics have repeatedly called for a transparent, understandable and well-founded procedure for finding a suitable site for high-level radioactive nuclear waste.

The fact that everyone wants transparency can be clearly seen from the current debates about the lobby register of the Bundestag and the demand to make MPs' salaries and additional income public. A demand for transparency has also accompanied the search and selection procedure for a repository for high-level radioactive nuclear waste since it began in the 1970s.
The 2002 final report by the Committee on a Site Selection Procedure for Repository Sites (AkEnd) invoked the central role of transparency as a "guiding principle" for successful site selection, in the wake of the poorly justified and politically motivated selection of the Gorleben final repository site. Transparency ought to ensure technical comprehensibility, prevent political influences on the procedure and thus restore credibility among the population (AkEnd 2002: 53).

In its final report in 2016, the Commission on the Storage of High-Level Radioactive Waste also spoke vehemently in favour of transparency in the procedure, and insisted on a right to transparency as a way to ensure that the critical groups in society remain involved. It argued that the population's broad participation and approval depends on full transparency of the procedure. It called upon those involved in the procedure always to disclose the reasons behind planned decisions in full and well in advance, and to brave the public's criticism from the early stages.

As we can see, the demand for transparency comes from different purposes and goals. Transparency is expected to promote trust and credibility, to make the reasoning behind decisions understandable, to enable participation, and to prevent unruly influence, mismanagement, and corruption.

Transparency is an uncertain term
So how can we understand the multifaceted concept of transparency? When we speak of transparency, we generally mean the provision of information by private or governmental actors to the public through appropriate channels. The concept of transparency is closely linked to other concepts such as openness, accountability, control, monitoring, and democratic participation. Generally, there is a distinction between the ideal and the practice of creating transparency. The provision of information, in turn, is closely linked to information technologies. Data digitisation and the Internet have enormously increased accessibility and the possibilities of providing knowledge and information, and have caused the volumes of data to explode.

Transparency has an intrinsic value for democracy. Freedom of information is considered a prerequisite for the exercise of fundamental rights and freedoms, like the right to free speech.

Dr. Jan-Hendrik Kamlage,
Head of Research Group Participation and Transformation at the Centrum für Umweltmanagement, Ressourcen und Energie (CURE), Ruhr-Universität Bochum

Research focuses
Democratic theory
Empirical deliberation and participation research
Sustainability and technology assessment
Public participation and voluntary engagement
European regional politics
Transformative research

Guest article by Dr. Jan-Hendrik Kamlage

Transparency requirements for the participatory repository site search – between effective and full transparency. A democratic theory classification

Legitimate institutions such as parliaments, governments, and judiciary and subordinate authorities can only be truly accountable if their actions are comprehensible and verifiable – for example by the media, organised civil society, townships or the public at large. The actions of politicians and administrators must therefore be justified and followable. Citizens must be given the opportunity to understand the actions of the administration and government, so that they can develop an informed opinion and participate in the formation of public opinion and will. It follows that the accountability of governments and politicians is asserted through the electoral process.

Ways to create transparency

We can distinguish between different ways in which transparency is created. One is top-down transparency, established by high-level bodies and instances, for example when governments publish information obtained from subordinate authorities and agencies. The opposite is bottom-up transparency, when authorities or local bodies request information and demand accountability from higher-level entities.

In general, transparency sits on a spectrum between the two extreme poles of full radical transparency on the one end and limited to no transparency on the other.

There are several other important distinctions to be made when it comes to achieving transparency in the real world.

We can talk about results transparency, which is achieved when the results are made known but the process that led to them remains largely obscure. This is in contrast to process transparency, which fully discloses information as it arises as well as the nature of the entire process. Results transparency has the advantage that the results – usually the most important aspect of a political process – are accessible and understandable. Yet, its disadvantage is that the deliberation, justification, and decision-making processes remain unclear. This leaves room for dishonest pact-making, sway, and manipulation. But on the other hand, this variant allows for non-public consultations that can bring about compromises that might otherwise never be reached.

Furthermore, we can make the distinction between full and effective transparency. The former promises that all information and data of the process and its results will be fully accessible. The latter, on the other hand, asserts a prerogative to select, process, and publish information according to relevance.

For the temporal dimension, we can talk of simultaneous (real-time) and downstream forms of information provision. Participation processes can be broadcast live to the online community, for example, in the form of audio or video via platforms like websites or social media. Downstream information provision, in turn, offers information and data after the events and consultations have taken place. Transparency is thus created at a temporal delay after the processes.

Full or radical transparency in real time has the advantage, for example, that it is nearly impossible to manipulate or alter the information and processes. Disadvantages are that it can be easier for personal rights to be violated or for the mass and density of information and data to be difficult for the public to grasp. In contrast, downstream information provision has the advantage that the data and information can be cleaned, prepared, and communicated in media-friendly and target-group-specific form, in order to reach and inform as many people as possible. Each form of transparency production has advantages and disadvantages and should be weighed and selected carefully against the background of the respective goals, the available resources, and the social environment.

Between full and effective transparency

The search for a repository site puts the institutions responsible in a difficult position when it comes to transparency. The social environment and parts of organised civil society will follow the site selection procedure with great scepticism in light of negative historical experiences. All institutions and bodies involved in the decision process should be aware that there will considerable burdens and risks to society in any region considered for a site. It is therefore advisable to offer approaches for providing early, comprehensive and complete data and information throughout all stages of the process and to present understandable reasoning behind each of the steps, as a way to ensure accountability.

This can still also be done downstream, so that the data and information can be thoroughly checked for coherence and errors first. After all, errors and inconsistencies are not tolerated in this environment. In addition to full transparency, establishing effective transparency is a wise pursuit, as a way of communicating the reasoning behind the site selection steps more meaningfully to the public and extending the social discourse to beyond those societal groups who are directly affected.

Asse mine – increasing acceptance of waste retrieval

Before the Asse II mine can be decommissioned, the radioactive wastes in it must be retrieved. This is the legal mandate of BGE.

The retrieval plan outlines all focal points of the project and describes the procedure for retrieving the radioactive waste. In all activities and phases of operation, the safety of operating personnel and of the present and future generations of residents has the highest priority. The retrieval plan serves as a basis for discussion with all parties involved.

Here we provide an overview of what discussions are being held with which stakeholders – when, where, how, and with what response.

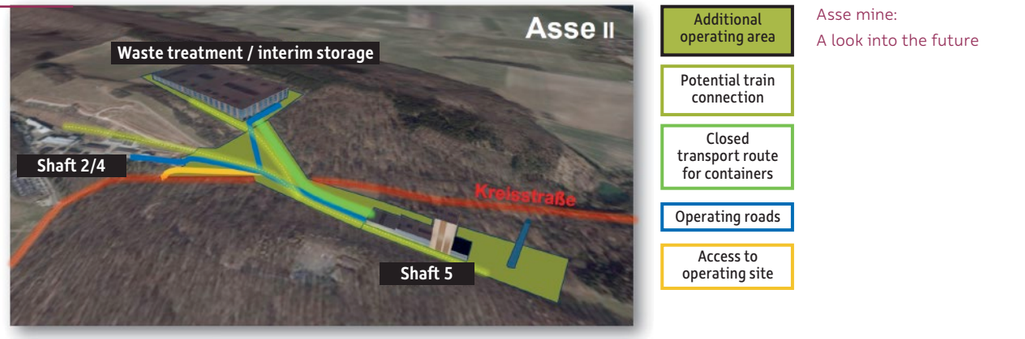
There are a number of established dialogue formats for openly discussing the Asse II mine. One is the Asse 2 Oversight Group. Also, at the beginning of 2021, BGE initiated early public participation in the Application Complex I stage of the licensing process for retrieving the radioactive waste. BGE wanted to publicly discuss the construction of the retrieval shaft and its connection to the existing mine. In particular, the discussion focused on the rock masses that would be generated in the process and on the compensation and replacement measures for nature conservation. At the end of 2020 already, the nuclear licensing authority invited the public interest groups and the developer to a first application conference.

"Early public participation was mandated by the Administrative Procedures Act. But we want to enter into dialogue with the public independently of legal obligations, so that we can make all facets of the project known at an early stage and can integrate suggestions from the public wherever possible," says Dr. Thomas Lautsch, Technical Managing Director of BGE.

Only two years ago, early public participation would have meant citizens and BGE would get together to engage in conversation, face to face, at various events in the region. However, the restrictions due to the coronavirus pandemic made such formats impossible. Dialogue could only be held in digital space, and this has had its limits. "We have all had to learn to work with digital formats in the past several months. The directness of communication is somewhat lost, but we have also gained new dialogue partners through it," says Dagmar Dehmer, Manager of Corporate Communication at BGE.

In order to raise awareness of the chance to participate, more than 45,000 households were directly contacted, advertisements were published in regional print and online media, and a radio spot was broadcast several times a day. Those interested were invited to participate in an online forum and in two online events. Also, people gave feedback by telephone and e-mail, which BGE integrated into the other dialogue formats on their behalf.

Unfortunately, the number of people participating in these formats was not very large. Dr. Thomas Lautsch says, "Of course we would have liked even more people to make use of our communication channels. Nevertheless, we will continue creating opportunities for participation in the future, and will intensively encourage people to get involved in the discussions at an early stage."



Asse mine:
A look into the future

Asse mine: Exploration drilling Remlingen 15

A scientific study will now evaluate how these channels for early public participation were perceived in the region. BGE also wants to identify the reasons that spoke for or against getting actively involved. The results of this study will reveal what BGE can do differently in the future in order to motivate more people to join in and contribute their ideas.

Currently, BGE is in the process of evaluating various opinions, and checking which suggestions could be worked into the licensing process. (fe)

More information about early public participation can be found on BGE's website at: https://www.bge.de/de/asse/themenschwerpunkte/fruehe-oeffentlichkeitsbeteiligung/

In dialogue – how direct communication works

BGE communicates on a high technical level transparently, comprehensively, understandably, and continuously – as one of BGE's communication guidelines.

It makes good sense for the site selection PR staff and the information centres in Asse, Konrad, and Morsleben to increase trust and acceptance by letting everyone know that BGE wants to promote information flow and dialogue. The following examples show what this involves and what it looks like in real life – with and without COVID-19.

Example 1: 41,000 DIN A4 pages
The plan-approval decision (nuclear licence) for Konrad is 851 pages long on its own. It is public. The licence for the repository is supplemented by explanatory documents on, for example, the measurement programme for radiological environmental monitoring and by supplementary documents on, for example, wastewater disposal from Konrad Shaft 2. The total of 41,000 pages are mostly not (yet) public.

In mid-2020, BGE received several requests under the Environmental Information Act that the documents be opened to the public. The Act gives citizens far-reaching rights to information. BGE is taking these requests as an occasion to publish a large part of the licensing documents. This gives private individuals, citizens' initiatives, scientists, and institutions the chance to understand individual issues in detail. Yet, the question remains, how many private individuals are willing and able to read this amount of specialist information?

Example 2: Responding to concerns and needs
"The state needs citizens who get themselves actively involved," believes Karen Haase of Info Asse. "And as a citizen, I have a right to be informed and taken seriously. It is our task to exercise this right." She has been working at the information centre for over ten years, during which she has guided thousands of visitors through the info centre and the mine. If you don't want to struggle through the thousands of pages of technical documents that have been published, about Asse for example, Karen Haase and the BGE information centres are the right people to turn to. They are there to introduce people to the subject matter and to provide further in-depth information on individual topics. In normal times, people can also visit the mines and gain their own impression of the state of affairs and the work being done there. They can ask questions, share their opinions, and express criticism. This is how dialogue begins. "There are always questions that we don't have an immediate answer to, even at the info centre. Responding to concerns and needs also means doing internal research and talking to the experts in the projects," says Karen Haase.

Example 3: Translation work
Sometimes it takes a certain amount of translation work during discussions to ensure that citizens and experts don't end up talking at cross purposes. This includes resolving any tension caused by the rift between plain language and technical jargon. Of course, information should be both understandable and technically correct. So, it can be helpful from time to time to discuss internally whether terms such as "convergence", "filling site", or "3D seismics" are generally understood or not.

Screenshot of the 360° tour of the Morsleben repository – Info Morsleben provides an alternative way to stay in the conversation even in times of COVID-19.

"The state needs citizens who get themselves actively involved." Karen Haase, Info Asse

One of the last events with an audience – regarding Konrad – in January 2020

And it is necessary to mediate between internal and external expectations. An important part of the dialogue work is thus directed inward. In this respect, PR forms an important bridge between society and BGE. Genuine dialogue cannot be a one-way street; there must be intensive communication in both directions.

Example 4: A mountain of questions
In order to enable and promote dialogue even in times of pandemic, BGE continued proactively communicating its issues in 2020. Prior to the Sub-Areas Interim Report, as the first major milestone in the repository site search, it published a magazine Standortauswahl Einblicke (Site Selection Insights). The magazine had a reach of around five million people. And immediately after the publication of the Sub-Areas Interim Report, 90 online consultation hours followed, one for each sub-area. This broad public sharing of information served as a basis for the ensuing dialogue on the site search.

Also as a result of this proactive communication, BGE received hundreds of questions, references and statements in a short space of time. Each letter deserved an individual, full and technically correct answer. This took considerably more time than originally thought, and the occasional delays brought criticism. At the same time, the work was worth it, as seen from the positive response to the communication efforts.

Example 5: BGE in conversation – yesterday and tomorrow
During the coronavirus pandemic, most events were held digitally. Many who would normally have been present were suddenly absent. The emotions were missing and the conversations on the sidelines were missing. That hurt, finds Karen Haase in the empty Info Asse office. At the same time, many who had not been able to attend before were now taking part. "This was a great enrichment, which ought to remain with us in the future," emphasises Haase. The additional digital channels, the availability of the content even after the event, that should stay. "One way or another – we'll keep in touch!" (mw)

Matthias Ranft, Geologist
Dialogue as a way of taking responsibility

Between 1971 and 1991 and from 1994 to 1998, a total of around 37,000 cubic metres of low- and intermediate-level radioactive waste was disposed of permanently in the Morsleben repository. Radioactive waste was also stored there temporarily. The repository is to be closed with the waste stored in it. The first licensing documents were submitted to the Saxony-Anhalt Ministry of the Environment in 2005. The process is currently underway.

As division manager for the Morsleben repository, geologist Matthias Ranft is the head of a major project: the first closure of a repository for radioactive waste under nuclear law. The focus is on developing a safe and robust closure concept and safety demonstration. These have to stand up in a licensing process. In the interview, Matthias Ranft tells us about challenges in the process and how the dialogue has changed over the years.
The project also includes the so-called "accompanying assessment" as part of the nuclear plan-approval procedure by the licensing authority.

Matthias Ranft

Katharina Kiefer: What is so challenging about a licensing procedure that has been going on for so many years?
Matthias Ranft: Any large project involves complex processes of planning and review. Long-running procedures and unavoidable bureaucracy create lengthy and iterative processes. It's like that for the closure of the Morsleben mine as well. So, it makes sense to involve the licensing authority and your experts in the planning process already, as well as in the ongoing provision of proof. This is what is meant by the "accompanying assessment". The way I see it, this close dialogue with the authority already during the planning process is the only right way. But it is still an enormous challenge.

Katharina Kiefer: It sounds like there are both opportunities and risks to a close accompanying procedure, which demands a high level of transparency on both sides. Has much changed over the years?
Matthias Ranft: Yes and no. Not in the subject matter, but in the procedure. The subject of our application – closure – is still the same. The concept for the closure is also the same. However, in the last two years, well over 500 documents have had to undergo complete restructuring in connection with the plan-approval procedure. Partly, this was necessary to account for further evidence based on new scientific findings.

We also changed the way we work with the licensing authority. A culture change was needed on both sides. We took the dilemma of communication according to Konrad Lorenz1 to heart, which is that something that is said is not always heard or understood, let alone agreed.

Katharina Kiefer: How does communication with the authorities work?
Matthias Ranft: We communicate at eye level with the licensing authority and operate with intensive requirements management at a high technical level. We have intensified the dialogue massively. At the meetings held at least once a month or often several times a month, we clarify in detail what is the burden of proof and thus what are the requirements for documentation. We question every ambiguity on both sides, no matter how small, in order to minimise the possibility of misunderstandings. This is especially important since there are no prior examples of a licence issued for decommissioning a repository; and while the legal wording "demonstration of the necessary precautionary measures against damage according to the state of the art in science and technology" sets a very high standard, it is not detailed or specific.

In this approach, we have to be prepared to see an idea that is good for us fail at an early stage, if it comes to it. And the authority needs to have the confidence to express itself even before all documents have been finalised. This works if we have transparency in the goals and data.

[1] Thought is not always said, said is not always heard, heard is not always understood, understood is not always agreed, agreed is not always done, done is not always done again.
Konrad Lorenz (1903–89)

"If we want to change from control to transparency, we need a cultural process."

At the same time, there has to be clear delineation and acceptance of the roles: we do the planning; the authority does the checking. These responsibilities must remain clear.

The interview was conducted by Katharina Kiefer, Head of Info Morsleben. (kk)

One cannot do without the other – how internal and external communication complement each other

BGE follows the same principles of communication internally and externally – just as the company's communication guidelines say.

Monika Hotopp

Martina Schwaldat

How does that work, exactly? This is the topic discussed between Spokesperson Monika Hotopp and Head of the Internal Communications Department Martina Schwaldat.

What are the special challenges in internal and external communication?
Monika Hotopp: One of the central challenges is making the complex issues of BGE understandable for everyone. Especially when topics get complicated, it is not easy to explain them concisely. The art lies in bringing out the essentials in an understandable way.

Martina Schwaldat: I think that hits the nail on the head! Another thing is that our internal communication has to cater to diverse interests among our employees. Some are conversant in mining-specific topics, and would like for everyone to communicate with the appropriate technical vocabulary. Others have difficulty following when terms like "offshoot", "pithead", or "coursing" are thrown around.

What communication channels are used?
Monika Hotopp: Alongside the two websites www.bge.de and www.einblicke.de, we use various social media channels such as Facebook, Twitter, Instagram, and LinkedIn. Since the social media sector is always in flux, we are also constantly testing new channels to reach additional target groups, including the younger generations.

Overall, social media allows us to stay connected with people we know and value. And it allows us to make new contacts, especially in times when none of us get out anywhere near as much as we used to.

Martina Schwaldat: When it comes to internal communication, the first thing that comes to mind is the intranet, of course. Every day, we provide company news for more than 2,000 employees. A particular challenge for us, however, is that not all colleagues have access to a computer. So we use all communication channels available to us. Notices, newsletters, and flyers still play an important part.

What are the current trends?
Monika Hotopp: At the moment, we only communicate digitally, both professionally and privately. This is, of course, due to the coronavirus pandemic, which has made face-to-face events basically impossible. We are thinking about how to use the new channels, so that we can develop tools, methods, and the basic attitude of learning new things.

Martina Schwaldat: Of course, the coronavirus pandemic makes no exception for internal communication. We are also switching more and more to digital events – be it for staff meetings, management meetings or professional development.

We have been thinking about introducing an employee app for some time now, to give all colleagues the chance to keep up with company news. The intranet is also undergoing a change. It's not just about communicating in one direction anymore – two-way conversation is becoming more and more important. We also have to consider the issue of gender-sensitive language.

What are the topics talked about most in the external and internal communication?
Monika Hotopp: The main topics in external communication are, of course, the three BGE projects: retrieving the radioactive waste from the Asse II mine, constructing the Konrad repository for low- and intermediate-level radioactive waste, and closing the Morsleben repository. For each of these, we report continuously on the current status and progress, and provide insights into our work. Another important topic is the site selection for a repository for high-level radioactive waste. In autumn 2020, BGE reached a first milestone with the publication of the Sub-Areas Interim Report. We also explain our approach and future steps regarding the site selection.

Martina Schwaldat: Our colleagues are our ambassadors to the outside world, and therefore need to know what the central issues of BGE are. That's why we are always in sync with external communication.

Aside from focusing on these topics, you also have to think constantly about the corporate culture, about personal exchange, and about networking. What changes are taking place in the company? How is knowledge transferred? In times when it is no longer ordinary to meet the employees in person every day, internal communication has to do more than just convey information. It must remain transparent, offer support, and preferably keep up the motivation.

What keywords would you say best describe BGE's internal and external communication?
Monika Hotopp/Martina Schwaldat: The same principles apply to both internal and external communication: we communicate transparently, comprehensively, understandably, and continuously; and we are dialogue-oriented and appreciative. We both agree that BGE only achieves credibility if it applies the same principles to its internal and external communication. What we mustn't forget either is that, with more than 2000 employees, internal information is always external information as well. So, the staff and the public are always informed of important developments or issues at the same time. (mh, ms)

Financial statements for the fiscal year from 1 January to 31 December 2020

Balance as of 31/12/20

Assets

in thousands of euros	As of 31/12/2020	As of 31/12/2019
A. Fixed assets		
I. Financial assets	5,113	5,623
	5,113	**5,623**
B. Current assets		
I. Stock		
1. Advance payments	5,840	3,905
	5,840	**3,905**
II. Receivables and other assets		
2. Receivables from the shareholder	111,000	103,030
3. Receivables from affiliated companies	122	10
4. Other assets	4,035	5,661
	115,157	**108,701**
III. Cash on hand, bank balances	670	117
	121,667	**112,723**
C. Accruals and deferrals	**396**	**351**
	127,176	**118,697**
Trust property	**3,409**	**3,431**

Liabilities

in thousands of euros	As of 31/12/2020	As of 31/12/2019
Equity		
I. Subscribed capital	2,825	2,825
II. Capital reserve	37	37
III. Retained earnings	1,942	1,942
IV. Profit carried forward	197	0
	5,001	**4,804**
B. B. Provisions		
1. Provisions for pensions	16,404	15,771
2. Tax provisions	1,389	1,021
3. Other provisions	49,513	42,992
	67,306	**59,784**
C. Liabilities		
1. Payments received	0	1
2. Trade payables	35,302	34,941
3. Liabilities towards the shareholder	3,312	3,563
4. Liabilities towards affiliated companies	688	847
5. Other liabilities	15,567	14,757
	54,869	**54,109**
	127,176	**118,697**
Trust property	**3,409**	**3,431**

Profit and loss account for the period from 1 January to 31 December 2020

in thousands of euros	As of 31/12/2020	As of 31/12/2019
1. Revenue	445,890	387,800
2. Other operating income	3,226	9,690
	449,116	397,490
3. Material expenses		
a) Cost of raw materials, consumables, supplies, and purchased goods	29,727	25,006
b) Cost of purchased services	206,517	191,547
	236,244	216,553
4. Personnel costs		
a) Salaries and wages	142,470	117,194
b) Social security contributions and expenditure on pensions and other benefits	35,368	29,635
	177,838	146,829
5. Other operating expenses	23,214	23,413
	437,296	386,795
	11,820	10,695
6. Income from loans under financial assets	197	0
7. Other interest and similar income	140	155
8. Interest and similar expenses	7,185	9,059
9. Taxes on income and earnings	4,726	1,737
10. Profit after taxes	**246**	**54**
11. Other taxes	49	54
12. Net annual profit	**197**	**0**

Konrad mine: Filling site 2nd level

Annex for the fiscal year 2020

General information

The financial statement of Bundesgesellschaft für Endlagerung mbH (BGE) for the fiscal year from 1 January 2020 to 31 December 2020 was prepared on the basis of the accounting provisions in the German Commercial Code (HGB). In addition to these regulations, the provisions of the GmbH Act and the articles of association were observed. According to the size classes specified in § 267 HGB, BGE is a large corporation.

The profit and loss account was prepared in accordance with the total cost method pursuant to § 275 (2) HGB.

BGE is entered in the Commercial Register of the Hildesheim Local Court under HRB 204918. The sole shareholder is the Federal Republic of Germany, represented by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). The company's registered office is located in Peine.

Information on accounting and valuation methods

BGE does not own any tangible fixed assets to be capitalised, since BGE transfers to the BMU ownership or rights to movable assets procured for the purpose of operation and financed by the BMU at the time when BGE itself acquires these rights.

Shares in affiliated companies are valued at acquisition cost. Loans are shown at their nominal value.

Advance payments are stated at their nominal value.

Receivables and other assets are valued at their nominal value. Value adjustments are made where necessary.

Cash and cash equivalents are stated at their nominal value.

Prepaid expenses relate to expense paid prior to the balance sheet date, which represent expenses for a specific period after that date.

Subscribed capital is carried at nominal value.

Provisions are recognised at the amount required to settle the obligation in accordance with reasonable commercial judgement.

Provisions with a remaining term of more than one year are discounted at the average market interest rate of the past seven years corresponding to their remaining term.

Provisions for pensions are measured on the basis of actuarial calculations using the projected unit credit method taking into account the "2018 G Mortality Tables" of Prof. Dr. Klaus Heubeck, Cologne. The pension obligations carried as liabilities are based exclusively on the benefit regulations and the defined contribution pension plan of Bochumer Verband for individual commitments. Provisions for pensions are measured at the average market interest rate of the past ten years published by the Deutsche Bundesbank (§ 253 (2) HGB).

With an assumed duration of 15 years, this corresponds to 2.31% (previous year 2.72%). The salary trend remains unchanged at 2.5%, the pension trend unchanged at 2.0% and 1.0% for commitments with an adjustment guarantee. Age- and gender-dependent probabilities are used for the expected employee development (fluctuation).

The difference resulting from the different valuation of pension provisions at the 7-year or 10-year discount rate (€1.405 million) is not subject to a distribution block in accordance with § 253 (6) sentence 2 HGB due to sufficient free reserves.

In addition, provisions are formed for uncertain liabilities from pension claims. The provisions are generally discounted in accordance with their term (§ 253 (2) HGB). As the remaining term is less than one year, the provisions were not discounted.

Provisions for anniversary bonuses within other provisions are also measured on the basis of actuarial calculations using the projected unit credit method, taking into account the "2018 G Mortality Tables" of Prof. Dr. Klaus Heubeck, Cologne. The current discount rate is 1.60% (previous year 1.97%).

Provisions have been made for social plan costs in connection with the transition to "purely keeping the Gorleben mine open" and the associated personnel reduction measures.

Other minor social plan costs have been set aside for existing claims.

Other provisions include amounts payable for services rendered by subcontractors, fees for the ongoing application procedure for closing the Morsleben radioactive waste repository and decommissioning the Asse II mine, and provisions for VAT risks. The other provisions take into account all identifiable risks and contingent liabilities.

Liabilities are stated at the settlement amount.

The excess of deferred tax assets over liabilities is not reported. The valuation of deferred taxes is based on a tax rate of 29.3% (15.82% for corporation tax, including solidarity surcharge, and 13.48% for trade tax). Differences between commercial law and tax law arise in particular with regard to pension provisions and procedural costs for closing the Morsleben repository and decommissioning the Asse II mine.

The accounting and valuation methods have not changed compared to the previous year and have been applied consistently.

Annex for the fiscal year 2020

Notes on the balance sheet

Fixed assets relate exclusively to financial assets and include the tenant loan with PALEA Grund-stücks-Verwaltungsgesellschaft mbH & Co. KG, Grünwald (PALEA) for the Peine administration building. For information on developments in the reporting year, please refer to the statement of changes.

The receivables from the shareholder (€111.000 million; previous year €103.030 million) result from the settlement of BGE's provision of services in 2020. Receivables from affiliated companies (€122,000; previous year €10,000) relate exclusively to BGE TEC and result from the invoicing of services in the scope of the agency and service agreement. All receivables, with the exception of receivables concerning long-term provisions (€27.949 million; previous year €27.326 million), and other assets have a remaining term of up to one year.

Other assets (€4.035 million; previous year €5.661 million) primarily relate to recoveries from quality assurance claims against energy supply companies and have a remaining term of up to one year.

Cash and cash equivalents (€670,000; previous year €117,000) mainly consist of short-term bank balances.

The capital reserve in the amount of €37,000 is made up of capital shares of DBE and Asse-GmbH that were not used to increase the subscribed capital.

BGE has made use of the option under Art. 67 (1) sentence 1 of the Introductory Act to the Commercial Code (EGHGB) to distribute the conversion expenses of pension provisions from the introduction of the Accounting Law Modernisation Act (BilMoG) on 1 January 2010 on a straight-line basis over a maximum period of up to 15 years. The annual amount of €214,000 is reported under other operating expenses. As of the balance sheet date, the shortfall in pension provisions thus amounted to €858,000.

Provisions for corporation tax (€781,000) and trade tax (€608,000) are shown in the tax provisions. The high anticipated income tax back-payments essentially result from previously very low advance payments.

Other provisions include the following items:

Other provisions

in thousands of euros	As of 31/12/2020	As of 31/12/2019
Provisions for outstanding invoices	20,049	19,064
Value-added tax (VAT) risks	11,833	5,800
Provision for procedural costs for closing the Morsleben repository for radioactive waste	7,368	7,609
Provisions for personnel obligations	6,634	7,062
Provision for procedural costs for decommissioning the Asse II mine	3,556	3,408
Financial statement costs	73	49
Total	**49,513**	**42,992**

Morsleben repository:
View into the new lamp room

Annex for the fiscal year 2020

The personnel-related provisions include obligations from vacation and time credits as well as minor remaining costs for the Gorleben social plan.

Liabilities to affiliated companies result entirely from the service relationships with BGE TEC. Liabilities to the shareholder consist entirely of trade accounts payable.

Other liabilities in the amount of €15.567 million (previous year €14.757 million) comprise obligations from VAT and wage tax payable (€13.755 million; previous year €14.413 million) for the months of November and December, adjustments to income taxes for 2019 (€1.710 million; previous year €0 million), as well as other payment obligations towards personnel (€79,000; previous year €289,000).

The item furthermore includes liabilities under social security in the amount of €23,000 (previous year €55,000).

All liabilities have a remaining term of up to one year.

There are no liabilities secured by liens or similar rights.

The €3.409 million reported in the balance sheet relates to security deposits held in trust for obligations under the Lower Saxony Nature Conservation Act for compensation and replacement measures in the Gorleben area. The trust assets are accordingly matched by trust obligations in the same amount.

Gorleben mine: Main conveyor section, 840 m level

Gorleben mine: New terrain modelling

Notes on the profit and loss account

Revenues

In the year under review, revenues are broken down by activity as follows:

in thousands of euros	As of 31/12/2020	As of 31/12/2019
Konrad	227,425	215,712
Asse	127,266	100,691
Morsleben	46,233	40,051
Gorleben	16,891	15,096
Quality assurance	12,808	9,856
Site selection	14,903	5,973
Other revenue	364	421
Total	**445,890**	**387,800**

Annex for the fiscal year 2020

The remaining revenues include the services for the subsidiary BGE TEC (€306,000; previous year €336,000), as well as revenue from the canteen business (€58,000; previous year €85,000). All revenue is generated domestically in Germany.

Other operating income (€3.226 million; previous year €9.690 million) includes income from other periods in the amount of €2.571 million (previous year €9.033 million). These are provisions no longer required for outstanding contractor invoices (€636,000; previous year €887,000), personnel measures at Gorleben (€1.082 million; previous year €0 million), as well as recourse and damage compensation claims against contractors, reimbursements of the Employer's Liability Insurance Association IG BCE and from incidental cost billings etc. (€853,000; previous year €8.146 million).

The considerable decline in other operating income is a result of changes in how the Employers' Liability Insurance Association for Raw Materials and the Chemical Industry (BG RCI) takes advance payments – there is no longer any consideration of the premium adjustment procedure starting from 2019. No-claims discounts in subsequent years are not expected.

The material expenses reported include in particular the cost of raw materials, consumables, and supplies (€29.727 million; previous year €25.006 million) and the cost of purchased services (€206.517 million; previous year €191.547 million). The cost of purchased services mainly includes work and other service contracts, temporary employment, energy costs, maintenance, and cleaning and guard services.

Costs of pensions amounting to €1.395 million (previous year €1.690 million) are shown under personnel costs.

The other operating expenses (€23.214 million; previous year €23.413 million) mainly comprise general administrative expenses, including rental costs, expert opinion and external consulting services, incidental personnel expenses, and fees relating to supervision under nuclear legislation. This item also includes the annual pro rata conversion expense in the amount of €214,000 resulting from the introduction of BilMoG relating to the underfunding of pension provisions as of 1 January 2010.

Income from shareholdings results entirely from affiliated companies, to the sum of €197,000.

Income from loans from financial assets in the amount of €140,000 mainly results from the tenant loan to PALEA.

Interest expenses of €7.185 million (previous year €9.059 million) mainly relate to expenses from provisions for VAT risks (€5.773 million; previous year €5.800 million) and the compounding of provisions (€1.406 million; previous year €1.209 million) as well as fees relating to payment transactions (€6,000; previous year €35,000).

Taxes on income and earnings comprise €2.468 million in corporation tax including solidarity surcharge and €2.258 million in trade tax.

Contingent liabilities and other financial obligations

The company conducts its business in an administration building rented in Peine. This results in future payment obligations of €1.383 million, based on a remaining term until August 2021. A further €6.122 million relates to the rental of parts of the building and storage space. Financial obligations from other existing rental, tenancy, or leasing contracts amount to €1.581 million for the agreed terms on the balance sheet date. Altogether, the existing contracts result in financial obligations totalling €9.086 million.

To secure existing and future claims of Volksbank eG Braunschweig Wolfsburg, there is a "guarantee for individual claims" for BGE TEC in the amount of €750,000. It is not assumed that this will be used because BGE TEC has sufficient liquidity.

Asse mine: Exploration drilling on the 700 m level for Shaft 5

Annex for the fiscal year 2020

Peine: Aerial view of the headquarters with new photovoltaic system

Management board remuneration in 2020

in thousands of euros

Manager	Base salary	Pension scheme	Other	Total 2019
Stefan Studt	295	0	8	303
Steffen Kanitz	275	0	20	295
Beate Kallenbach-Herbert	275	0	1	276
Dr. Thomas Lautsch	275	15	7	297
Total	**1,120**	**15**	**36**	**1,171**

Other Information

Members

Management board

The company was managed in 2020 by the following managing directors:

Stefan Studt, Rickert,
Chairman of the Management Board

Steffen Kanitz, Dortmund,
Deputy Chairman of the Management Board

Beate Kallenbach-Herbert, Braunschweig,
Commercial Managing Director

Dr. Thomas Lautsch, Peine,
Technical Managing Director

Para 5.2.5 of PCGK notwithstanding, no age limit has been set for occupying a position in BGE management. The contracts of the current management are fixed in term such that no member of the management will reach the legal retirement age before the end of the term.

Management remuneration in the 2020 reporting year comprises fixed salary payments including fringe benefits. Performance-related remuneration components are not paid.

A total of €7.541 million was set aside to cover pension obligations to former members of the management of a merged legal entity; their current emoluments amounted to €592,000 in 2020.

Annex for the fiscal year 2020

Supervisory board

The following are members of the supervisory board:

Jochen Flasbarth
State Secretary, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Chairman)

Gregor van Beesel
BGE (Employee Representative, Deputy Chairman)

Dirk Alvermann
BGE (Employee Representative)

Ursula Borak
Deputy Director-General, Federal Ministry for Economic Affairs and Energy

Dr. Wolfgang Cloosters
Head of Directorate-General, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Sabine Diehr
Head of Division, Federal Ministry of Education and Research (until 2 June 2020)

Leonie Gebers
State Secretary, Federal Ministry of Labour and Social Affairs

Prof. Dr. Karin Holm-Müller
Professor of Resource and Environmental Economics, University of Bonn

Franz-Gerhard Hörnschemeyer
Industry Group Secretary for Energy Sustainability at the Mining, Chemical and Energy Industries Union

Dr. Holle Jakob
Head of Division, Federal Ministry of Finance

Dr. Andreas Kerst
Head of Division, Federal Ministry of Finance

Sylvia Kotting-Uhl
Member of the Bundestag and Chair of the Committee for the Environment, Nature Conservation and Nuclear Safety

Jens Lindner
BGE (Employee Representative)

Gabriele Theisen
BGE (Employee Representative)

Peter Wolff
BGE (Employee Representative)

Para. 6.2.2 of PCGK notwithstanding, no age limit has been set for occupying a member seat on the BGE supervisory board, in order to ensure that additional specific skills and experience can be introduced to the benefit of the company.

Management reports to the supervisory board in accordance with § 90 of the German Stock Corporation Act (AktG). In addition, reservations of approval in favour of the supervisory board are laid down in BGE's articles of association for transactions of fundamental importance. These are, in particular, decisions and measures that could lead to a significant change in the business activity within the framework of the articles of association or to a fundamental change in the Company's net assets, financial position, operational results, or risk structure.

By resolution of the shareholders' meeting on 23 August 2017, the attendance fee for supervisory board members who are neither members of the German Bundestag or federal government, nor are in a service or employment relationship with the Federal Republic of Germany, was set at €4,000 per year. The following members of the supervisory board received this attendance fee in 2020:

Dirk Alvermann
Gregor van Beesel
Prof. Dr. Karin Holm-Müller
Franz-Gerhard Hörnschemeyer
Jens Lindner
Gabriele Theisen
Peter Wolff

The supervisory board has formed a presidium made up of four supervisory board members who can prepare supervisory board decisions; the final decision remains the responsibility of the supervisory board.

PCGK – Public Corporate Governance Code

The company issued a declaration of conformity in accordance with the Federal Public Corporate Governance Code for 2019 in July 2020 and published this on the company's website. The declaration of conformity for 2020 is to be published in June 2021.

German Sustainability Code

In 2021, BGE is creating a sustainability code report for 2020. This does not replace the financial declaration according to § 289b ff. of the Commercial Code (HGB).

Auditor's fee

The total fee for the auditor calculated for the fiscal year is shown in the BGE consolidated financial statements.

Quality assurance: Container type testing
(Photo: GNS Gesellschaft für Nuklear-Service mbH)

Annex for the fiscal year 2020

Number of people employed

On an annual average, there were 1,798 people in the company's employ in the sense of § 267 (5) HGB:

Sites	Employees/ annual average	Of which women
Salzgitter	60	28
Wolfenbüttel/Remlingen	552	103
Peine/Berlin	548	237
Gorleben	32	1
Morsleben	151	23
Konrad	455	33
Total employees	**1,798**	**425**

Distribution of profit

The net profit for the year in the amount of €197,000 is to be distributed to the shareholder.

Asse mine:
Training at BGE

Shareholding

One shareholder owns 100% of the interest in BGE TEC.

As of 31 December 2020, the equity of BGE TEC amounted to €2.721 million. In fiscal 2020, the company generated a net profit of €108,000.

Peine, 31 March 2021

Stefan Studt
Chairman of the Management Board

Steffen Kanitz
Deputy Chairman of the Management Board

Beate Kallenbach-Herbert
Commercial Managing Director

Dr. Thomas Lautsch
Technical Managing Director

Development of fixed assets
1 January to 31 December 2020

Acquisition and manufacturing costs

Value adjustments

Carrying amounts

in thousands of euros	As of 01/01/2020	Additions	Retirements	As of 31/12/2020	Accumulated depreciations 01/01/2020	Additions	Retirements	Accumulated depreciations 31/12/2020	As of 31/12/2020	As of 31/12/2019
Financial assets										
1. Shares in affiliated companies	690	0	0	690	0	0	0	0	690	690
2. Other loans	4,933	0	510	4,423	0	0	0	0	4,423	4,933
	5,623	**0**	**510**	**5,113**	**0**	**0**	**0**	**0**	**5,113**	**5,623**

Management report for the fiscal year 2020

Company basics

When the act to reform the organisational structure in the area of final disposal of nuclear waste was passed on 30 July 2016, there was a shift in the responsibilities of the institutions concerned. The federal government established the Bundes-Gesellschaft für Endlagerung mbH (BGE) to perform the tasks of final disposal in accordance with the Atomic Energy Act (AtG) and to carry out the site selection procedure in accordance with the Site Selection Act (StandAG). It is organised as a company under private law and is wholly owned by the federal government of Germany.

By decision of 24 April 2017, last amended by the decision of 31 July 2020, the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) conferred upon BGE the duties of the federal government, pursuant to § 9a (3) sentence 1 AtG, and the sovereign powers required for this purpose, pursuant to § 9a (3) sentence 3 (first half) AtG.

Duties conferred include:

1. the construction, operation, and closure of repositories as well as the operation and decommissioning of the Asse II mine in accordance with § 57b AtG with all associated duties pursuant to § 9a (3) sentence 1 AtG.

2. the sovereign powers to issue administrative acts in accordance with
a) § 3 (1) sentence 2 of the Nuclear Waste Disposal Regulation (AtEV), confirming the suitability of waste packages for final storage.
b) § 2 (5) sentence 1 number 1 in conjunction with sentences 2 and 3 of the Act reorganising responsibility for nuclear waste management (EntsorgÜG), which establish the eligibility of waste packages containing radioactive waste with negligible heat generation to be handed over to the third party under § 2 (1) sentence 1 EntsorgÜG.
c) § 7 (2) AtEV, by which the waste is retrieved for emplacement in a repository in accordance with the provisions laid down.
d) those under § 34 (1) or (2) in conjunction with § 35 (1) of the Geological Data Act (GeolDG), deciding on the public provision of non-governmental technical or assessment data.

Having been conferred the duties of the federal government pursuant to § 9a (3) sentence 1 AtG, BGE also becomes the project sponsor within the sense of StandAG.

Likewise, with the exception of the Konrad project, BGE is the building owner within the meaning of the relevant building regulations. With effect from the end of June 2019, the building owner status for the Konrad project was transferred to the federal government. In order to fulfil its tasks, the federal government has set up a building authority ("privileged construction" in accordance with § 74 of the Lower Saxony Building Code and supervision of the construction work) at the Federal Environment Agency (UBA); in addition, BGE has been authorised to fulfil all building owner's tasks/duties not incumbent on the UBA in the Konrad project on behalf of the federal government.

Furthermore, in a letter dated 13 September 2019, the BMU conferred full exclusive responsibility for developing the repository for high-level radioactive waste to BGE.

BGE employs personnel who have been appointed or provided by the Federal Office for Radiation Protection (BfS).

The company's contracts with third parties are awarded in accordance with public procurement law.

Control system

BGE's mission is to guarantee the safe disposal of radioactive waste. In this way, it contributes to the protection of man and environment and to solving a socio-political problem.

In order to achieve this goal, BGE guarantees the responsible and transparent implementation of the projects entrusted to it. These include constructing and operating the Konrad repository, retrieving the radioactive waste from and decommissioning the Asse II mine, keeping the Morsleben repository open until closing it, and implementing the measures scheduled in the current mining operation plan for the Gorleben mine. Further duties of BGE include quality assurance, which ensures that only approved waste packages are emplaced in the Konrad repository, and selection of the site that guarantees the best possible safety for final disposal of high-level radioactive waste.

Safety comes first for BGE. This applies as much to occupational health and safety as it does to long-term operational safety.

BGE is equally committed to the responsible use of the financial resources made available to it for these duties, and to compliance with all legal requirements and burdens of proof relating to the award of contracts and the use of funds by a public-sector enterprise. In particular, the principles of economy and efficiency must be observed. Profitmaking is not the goal of the company. BGE is furthermore subject to special guidelines for action under nuclear and mining law.

The mission statement and the corporate goals form the guidelines for carrying out the corporate duties. These guidelines are supplemented by the Financial Statute (set out by the shareholder) on economic management and financial and asset management within BGE, the internal regulations based on this statute, and the economic plan approved by the shareholder as well as the schedules and workflows of the projects.

The company uses various financial and non-financial performance indicators to manage its activities in the interests of the corporate goals and the implementation of the corporate strategy. These are continuously evaluated and presented in BGE's reporting system.

Key financial performance indicators are the costs of the projects and associated general overheads. The 2020 budget anticipated net costs of €575.879 million. In contrast to this, the actual costs amounted to €447.461 million.

Management report for the fiscal year 2020

Project costs

Project costs in thousands of euros	1st 2019	1st 2020	Budget 2020	Deviation 2020	Forecast 2021
Konrad	215,538	229,468	282,217	–52,749	248,847
Asse	101,689	127,158	175,344	–48,186	147,401
Morsleben	40,051	46,233	59,940	–13,707	56,167
Gorleben	15,096	16,891	17,479	–588	11,929
Site selection	5,973	14,903	25,148	–10,245	34,857
Quality assurance	9,856	12,808	15,751	–2,943	19,074
Total	**388,203**	**447,461**	**575,879**	**–128,418**	**518,275**

The difference between costs in the amount of €447.461 million and revenues in the amount of €445.890 million declared in the profit and loss account results from the balance of advance payments paid and reversed. In addition, these costs include the transfer of invoices to BGE TEC and sales revenue from reclassifications due to the German Accounting Directive Implementation Act (BilRUG) as well as the Asse canteen business in the BMU projects.

The reasons for not achieving performance indicators in the project areas and overarching areas can be summarised as follows: There were delays in planning, award of contracts, and licences. Maintenance costs were reduced owing to the plants, systems, and components being in good condition. There was defective or delayed performance by contractors. Changes in plans and execution were necessary due to unforeseen technical or geological conditions. Furthermore, there were COVID-19 related impacts on all projects. Plans were adjusted accordingly. In particular, planned investments were closely scrutinised and measures that were not absolutely necessary were cancelled or postponed. In underground operations, there were delays in the Asse and Konrad mines due to the reduced crew strength, which could not be completely made up for. This also applies to deliveries by contractors, the awarding of contracts, and the hiring of new personnel.

The following chapters explain the trends in the indicators, especially in the course of business and in the earnings, financial position, and net assets.

The 2020 budget forecasts net costs of €518.275 million for 2021. The respective milestones and tasks to be achieved are presented in the forecast report.

The company's activities are under the scrutiny and supervision of the shareholder, the supervisory board, the Federal Office for the Safety of Nuclear Waste Management (BASE) as well as other authorities, and equally importantly in the focus of the public. BGE therefore provides regular and event-related information about its projects and seeks professional dialogue with experts and the specialist public. Important developments and decisions for the projects are documented and made public as a rule.

Management report for the fiscal year 2020

Research and development

For the implementation of the site selection procedure, the Site Selection Division is identifying relevant research and development (R&D) needs and compiling these into a research agenda. Furthermore, a research roadmap has been prepared as an accompanying document, placing the needs identified and projects formulated in the context of the phases of the site selection procedure.

In 2020, R&D projects were continued and initiated on behalf of BGE for the site selection procedure. This includes the projects "Thermal integrity of clay and mudstones – experiment and coupled thermal, hydraulic, mechanical, and chemical (THMC) simulations" and "PIONIER – Implementation and further development of material models for the simulation of THM-coupled processes in the context of safety-analytical investigations in clay rock and bentonite". The R&D projects "Prerequisites for the safe final disposal of heat-generating radioactive waste (RESUS) and the RESUS expansion" and projects on the exclusion criteria "seismic activity and active fault zones" were concluded. The project "Thermodynamic Reference Database – THEREDA" is a joint project that was continued and advanced in 2020. Furthermore, BGE entered the international Mont Terri Project. The net costs for R&D activities associated with site selection in 2020 were €3.020 million (previous year €1.400 million). These are included in the costs of the project.

Furthermore, BGE continued its exchange and cooperation with international partners and organisations. In the scope of a workgroup on Implementing Geological Disposal of Radioactive Waste – Technology Platform (IGD-TP), BGE worked on updating the strategic research agenda of the IGD-TP. BGE increased its involvement in the joint research programme of the European Union on the disposal and management of radioactive waste (EURAD). With the mandate from the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), from the Federal Ministry for Economic Affairs and Energy (BMWi) and from the Federal Ministry of Education and Research (BMBF), BGE is involved as the German Waste Management Organisation in four EURAD projects (UMAN, State of Knowledge, GAS, and HITEC).

The research, development, and demonstration test requirements (RD&D requirements) of BGE for 2021 are being determined and will be compiled and published in a research programme. The existing projects will be continued.

Morsleben repository: Peter Osbelt, Chief of the Mine Rescue Team

Konrad mine: Aerial view of Konrad Shaft 1

Management report for the fiscal year 2020

Economic report

Business development

The articles of association, the transfer of exercise of duties, the budget, and the resolutions of the supervisory board and the shareholder form the basis for the business management of BGE. The details of economic management are regulated in the Financial Statute.

General

In 2020, as part of the corporate development in particular, processes were further reviewed and leaner and uniform processes were established. Some processes have already been simplified and others put to the test. Digitisation was accelerated in all areas. The pilot for the integrated document management system has been launched.

Another important part of the company's development is the implementation of the mission statement developed in 2019. To this end, a comprehensive training concept was developed in 2020 with the support of expertise from outside.

A further highlight was the energy management certification audit. Key company guidelines were standardised, for example, on risk management and economic feasibility studies.

The use of social media was significantly increased and the communication strategy updated.

BGE continued to present its projects and tasks transparently to the outside in the form of dialogue-oriented communication.

An important component of BGE's public relations work was communicating the Asse retrieval plan and the Sub-Areas Interim Report in the site selection procedure. For example, online consultations and live streams were organised and implemented for each sub-area.

Floor space was expanded by building two office modules in Peine and renting additional office space in Peine and Salzgitter. A photovoltaic system was also installed into the central building in Peine. A milestone in promoting e-mobility was the provision of charging infrastructure for e-vehicles. IT projects were continued, and IT systems were expanded, optimised and updated.

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Construction of the Konrad repository

The Konrad mine is being converted into a repository for low- and intermediate-level waste. Once complete, up to 303,000 cubic metres of low- and intermediate-level radioactive waste will be emplaced in it. It is the first repository in Germany to be licensed under nuclear law. The licence for the construction and operation of the repository was given in 2002.

Konrad 1

The second construction phase of the administration and social building was completed and the central control room in the building was brought into operation.

The interior work on the north hoist building was completed. The building was handed over to the operator.

The planning and construction of the workshop building was contracted. Construction work has begun.

Extensive work is also being done in the shaft itself. In the Konrad Shaft 1 piping, all wooden installations of the old shaft hoisting system and all shaft chairs were removed, partly in order to reduce the fire load in the incoming ventilation shaft and partly to make room for installing the new shaft hoisting systems. A shaft chair is a guiding device for the shaft hoisting system at the penetration points between pit and shaft.

In the course of 2020, there were delays that resulted in lower costs than planned, as the necessary preliminary tests could not be completed as scheduled. There were performance delays associated with the manufacture and delivery of the K1 shaft hoisting system.

Konrad 2

Important construction work began at the Konrad 2 mine site in 2020.

The contract award process for the mine water transfer station was completed and construction commenced. As part of operating the final repository, the underground mine water will be collected and radiologically tested. If cleared by this testing, the waters will be released into the buffer basins and discharged from there, together with other treated wastewater from the plant.

Construction of the depot was started.

After a delay, the contract for designing and constructing the Konrad 2 shaft hoisting system was awarded in the first quarter of 2020.

The delay resulted from a lawsuit filed by a losing bidder, which ended in BGE's favour. The design and construction of the Konrad 2 winding tower were also awarded. The shaft hoisting system and the winding tower are of central importance, since the containers with radioactive waste will be transported via Shaft 2 in future.

In the course of excavating the underground filling site, the rock in the transition area to the shaft shifted more than expected, meaning excavation had to be interrupted and the support system reinforced. Driving will therefore continue until 2021. The filling site is the area of the future repository where waste will arrive through the shaft and be transferred to vehicles, which will then transport it to the emplacement chambers via the emplacement transport routes. The interruption of driving caused shifts in performance and costs.

Pit

In 2020, the underground joints of the outer shotcrete shell for the future infrastructure area of the Konrad repository were closed. These allowed the rock to relieve stresses and redistribute pressure via movements (called convergences). Once these convergences had subsided, the joints were cleaned and sealed. Afterwards, installation of the inner shell began in the area of the pit side rooms.

Underground operations particularly suffered performance drops due to the COVID-19 pandemic. In some cases, despite additional protective measures, haulage was restricted to a minimum number of people.

Reducing the deployment of personnel in underground operations to maintain the prescribed minimum distances in particular resulted in lower costs in 2020.

Management report for the fiscal year 2020

Overarching measures

Work continued on the planning and legally mandated preliminary examination of the vehicles and equipment for emplacement operations, as well as the execution planning for various infrastructure measures.

Production of the stacking and side-stacking vehicles commenced at the contractor's site. Series production of the plateau trucks began.

In addition, conversion of the medium-voltage connection between Konrad 1 and Konrad 2 from 20 kV to 30 kV was successfully completed at the end of November. This helps significantly improve the mines' security of supply.

The design review document of the stacking vehicle had to be revised, and production therefore started later. Repetition of the tendering process for the crane equipment in the reloading hall also led to cost shifts.

Decommissioning of the Asse II mine

Between 1967 and 1978, around 47,000 cubic metres of low- and intermediate-level radioactive waste were emplaced in the mine. Retrieval has been a legal mandate since 2013 and is scheduled to begin in 2033.

The tasks relating to decommissioning the Asse II mine include measures for retrieving the radioactive waste as well as the implementation of precautionary measures from the emergency plans.

Retrieval

The seismic surveying was completed in the first quarter at a lower cost. The survey measurements serve to deliver reliable data on the structure of the overburden and the geological structure of the Asse mountain range. This is an important step along the way to retrieving the radioactive waste. Only with the help of the data obtained can the licensing documents for retrieval and subsequent decommissioning be created with the necessary accuracy. With the measurements complete, the data sets obtained are to be evaluated.

Retrieval of the radioactive waste is planned as a multi-stage process. The retrieval from three levels is being considered simultaneously, yet separately from one another. The reason for this is the differing level of knowledge about the individual emplacement chambers and their different conditions. The conceptual plans for retrieving the radioactive waste from the three levels have largely been completed. The tender documents for developing the retrieval methods for the first two chambers were published in 2020.

The publication of the Asse retrieval plan on 27 March 2020 set the course for the upcoming licensing and participation processes. The retrieval plan contains the concept for the retrieval mine, the strategy for waste treatment, and a site proposal for an interim storage facility. BGE requested an application conference with the Lower Saxony Ministry for the Environment, Energy, Building and Climate Protection, as the competent licensing authority.

This conference took place on 16 December 2020 and marks the entry into the licensing process for the retrieval mine. During the conference, BGE presented the four "application complexes" for structuring the retrieval licensing process. The concerns of the conference participants were heard. For the construction of the retrieval infrastructure, BGE entered into a regional planning procedure with the Regional Association of Braunschweig.

The drilling sites for two surface exploratory boreholes were set up and the first borehole has been started. The results are to be incorporated into the geological and hydrogeological model of Asse and are important for making new findings regarding solution ingress into the Asse II mine.

More drilling is required for further exploration of the starting point for the new recovery shaft and the retrieval mine. The contract for this was awarded at the end of 2020.

Due to the lengthy processes for obtaining licences for the Remlingen 15 extended reach drilling, work cannot begin until early 2021. Insights gained from the fact-finding survey could not be implemented in 2020 due to internal delays in commissioning and delivery delays.

Land must be acquired for construction of the recovery shaft, the waste treatment and interim storage facilities, and the surface infrastructure. BGE has entered into negotiations with the landowners of the required parcels. No land could be acquired in 2020.

Emergency planning and precautionary measures

As emergency and precautionary measures, approximately 20,000 cubic metres of Sorel concrete were introduced into the mine in 2020 for filling residual voids and for constructing geotechnical structures (flow barriers). Owing to changes in planning, the effects of being in COVID-19 contingency mode and the lack of licences, around 10,000 cubic metres less Sorel concrete than planned was introduced for stabilising the mine workings in 2020. Also affected were drilling crew numbers and the originally planned backfilling of the former Test Field 5 on the 775 m level. Further backfilling and injection work was delayed due to outstanding or delayed licences. The closure structures for a cavern section on the 825 m level could not be constructed.

Nevertheless, the solution storage and pumping facility was completed, as an essential part of the infrastructure required for counter-flooding. The facility was then tested in some areas.

To compensate for the reduced capacities owing to the COVID-19 pandemic, non-priority measures for conversions and modernisation were postponed and security services were updated.

Closure of the Morsleben radioactive waste repository and procedure for the Gorleben mine

Between 1971 and 1991 and from 1994 to 1998, a total of around 37,000 cubic metres of low- and intermediate-level radioactive waste was disposed of permanently in the Morsleben repository. Radioactive waste was also stored there temporarily.

The tasks in connection with the Morsleben repository for radioactive waste include keeping the repository ready for closing and approving the plans for its closure.

Management report for the fiscal year 2020

Plan-approval procedure

In the plan-approval procedure in 2020, essential requirements for the closure of the Morsleben repository (demonstration period, methodology for the proof of seals, structure of the licensing documents) were coordinated with the licensing authority. It is anticipated that the approval request documents will be completed in 2026.

Detailed geological cross-sections are being created from the modified repository model to demonstrate the integrity and stability of the repository, including in the post-operational phase. These new integrity verification methods are currently being employed at the Bartensleben southern field.

The development and testing of a requirements-compliant cavity contour (post-cut) for a demonstration structure in the anhydrite was completed in November 2020. The results are currently being evaluated.

The development of a modified magnesia concrete started in January 2020. This included tests in the laboratory and in situ, with the aim of improving the setting behaviour of the building material. Based on this, a formulation with superior flowability was elucidated in April 2020. Further tests are being carried out on this building material and its properties in contact with anhydrite.

The reduction in costs for the plan-approval procedure and overarching measures is mainly due to the postponement of services for the backfilling and sealing of safety-relevant boreholes, preliminary investigations and preparatory work relating to the demonstration structure in the main anhydrite (in-situ sealing structure in the anhydrite), as well as services for investigating corrosion on the salt concrete during the tests.

Keeping the repository ready for closing

In the interests of maintaining readiness for closure, work was completed on renovation of the wastewater and rainwater network and construction of a man-haulage bridge.

The mandatory 5 yearly general inspection by the nuclear supervisory authority was carried out successfully in 2020.

Various measures were not implemented, owing to delays in tendering and award processes, the need for concept adjustments, and the revision of implementation plans and nuclear licensing procedures, and this resulted in lower costs.

Gorleben

The Sub-Areas Interim Report for the Site Selection Procedure, published on 28 September 2020, does not include the Gorleben-Rambow salt structure as a designated sub-area. This means that, pursuant to § 36 (2) sentence 2 StandAG, the Gorleben mine is no longer to be kept open, since the location Gorleben is not one of the sub-areas identified in accordance with § 13 (2) StandAG. The Gorleben-Rambow salt dome is thus excluded from the ongoing procedure, meaning the future management of the Gorleben mine must be coordinated with the shareholder.

In 2020, the building that replaces the former pithead, office and social building was erected as part of the measures listed in the current mining operations plan. Certain other measures could not be completed due to outstanding or delayed official licences and a lack of tenders. The control system of the middle man-haulage system was renewed. The lower costs compared to those anticipated in the budget result mainly from the postponement of services for the release from mining authority control and the fact that no services were required for subsequent documentation.

Site selection procedure

The site search for a repository for high-level radioactive waste recommenced with the first Site Selection Act (StandAG). Following the amendment to StandAG in 2017, BGE received the order to locate a site by 2031 that would offer the best possible safety for the containment of high-level radioactive waste for one million years.

The focus of site selection in 2020 was on finalising the documents on identifying sub-areas in accordance with § 13 StandAG. These were published on 28 September 2020 in the form of the Sub-Areas Interim Report and its supporting documents. BGE also provided support for the opening meeting for the sub-areas conference, subsequent information events, and preparations for the first sub-areas conference in February 2021. In addition to the initial preparatory work to determine the siting regions, the first scheduling, in the sense of rough planning as defined in § 14 StandAG, commenced in the course of the fourth quarter of 2020.

The geodata and information on the criteria and minimum requirements, supplied by the federal and state authorities, were checked for completeness and usability in 2020 and accordingly homogenised. Due to the coronavirus pandemic, the campaigns for digitising analogue data kept at the federal and state authorities for the exclusion criterion "Influences from past and present mining activities" could only be continued to a very limited extent. The methods and techniques for identifying sub-areas underlying the application of the exclusion criteria, minimum requirements, and geoscientific weighing criteria were finalised and applied in the third quarter of 2020, which marks the achievement of these milestones.

The Sub-Areas Interim Report was the key milestone achieved in September 2020. This report, together with the supporting documents and the geoinformation system, was publicly presented and discussed with the aim of ensuring traceability and the greatest possible transparency. The results were publicly presented to the Federal Press Conference (Bundespressekonferenz). This was followed in the period from October to November 2020 by the opening meeting for the sub-areas conference as well as various online discussion rounds on the individual sub-areas and an online event on the site search for a nuclear waste repository in Germany. Further events in February, April, and June 2021 were and will be organised by BASE as the responsible body for public participation and as a service provider for the sub-areas conference.

Due to the intense concentration of resources on the milestones relevant for timely publication of the Sub-Areas Interim Report, it was not possible to implement or initiate certain other planned R&D projects and contracts. Furthermore, due to the coronavirus pandemic restrictions, only online events could be held for the public presentation of the Sub-Areas Interim Report and its supporting documents. This led to lower costs overall.

Management report for the fiscal year 2020

Quality assurance measures

It is a legal requirement for energy supply companies to surrender quality-assured waste packages permanently to BGZ Company for Interim Storage (Bundesgesellschaft für Zwischenlagerung mbH). In 2020, energy supply companies submitted 213 new applications for quality assurance measures and for container type testing.

The main tasks of quality assurance were accordingly qualification of conditioning processes, examination and approval of flow charts, change requests for existing flow charts and waste packages, and container design type testing. The quality assurance for radioactive wastes involved technical assessments by experts. These experts were commissioned for a total of 280 test procedures. In the same period, 92 change requests, 69 documents, and 17 procedure qualifications were approved by quality assurance. It is aimed in future to have these services billed under a schedule of costs.

In 2020, further progress was made in digitising the approval request management system. The aim is to have complete digital management of the project organisation and handling with the applicants and experts in the scope of the Nuclear Waste Logistics project. For the sake of uniformity of this digitisation, data were exported from analogue files into a uniform system operated by BGE in the first half of 2020. This included step-by-step checking for completeness of the existing documentation as well as its final filing in combination with complete digitisation.

Technical notes explaining and specifying the requirements arising from the final storage conditions and the quality assurance reports were prepared and issued by BGE. These documents serve, among other things, to illustrate appropriate procedures for carrying out the quality assurance process.

Regular technical meetings and specific expert and status talks were held in 2020 to targetedly coordinate the work relating to quality assurance and type testing. On these occasions, energy supply companies, container manufacturers, experts, and supervisory authorities participated to discuss current issues, identify and schedule time-critical tasks, and monitor their execution.

Implementation of the incidental provisions of the water resources law is of great importance for ensuring suitability as a final repository according to the plan-approval decision (nuclear licence) for Konrad. This takes into account the amendment of the Groundwater Ordinance (GrwV).

The adaptation to updates to the derivation of insignificance thresholds for groundwater, made by the Federal/State Working Group on Water Issues (LAWA), is not yet concluded.

The parties also held regular technical discussions in 2020 in relation to the water resources law. The costs for this are allocated to the Konrad project.

Gorleben mine: Reno Lange,
Mine Rescue Team Equipment Chief

Gorleben mine: Exhaust air conduit, 820 m level

Konrad mine: At Konrad Shaft 2

Morsleben repository: E-mobility in mines

Earnings, financial position, and net assets

Earnings

The company's revenues increased compared to the previous year, from €387.800 million to €445.890 million. Of this, €445.525 million (previous year €387.378 million) is attributable to the shareholder due to the transfer of all expenses for the current fiscal year. In addition, revenues include the invoicing of services to the subsidiary BGE TEC in the amount of €306,000 (previous year €336,000) as part of the agency and service agreement, as well as revenue from the canteen business (€58,000; previous year €85,000).

Other operating income (€3.226 million; previous year €9.690 million) includes provisions no longer required for expected settlements for services in 2019 (€636,000; previous year €887,000) as well as recourse and compensation claims against contractors (€989,000; previous year €127,000). The Gorleben social plan settlement is largely completed and has been dissolved with the exception of a small amount of payments to be made in 2021 (€1.082 million; previous year €0 million).

Other operating income of total €519,000 (previous year €8.676 million) includes the reimbursement of the Employer's Liability Insurance Association IG BCE, offset remuneration in kind, credit notes from contractors, and a reimbursement of costs for a research contract.

The costs of operational management in the amount of €449.256 million (previous year €397.645 million) break down as follows:

Costs of operational management

in thousands of euros	2020	2019
Material expenses	236,244	216,553
Cost of raw materials, consumables, and supplies	29,727	25,006
Cost of purchased services	206,517	191,547
Personnel costs	177,838	146,829
Other operating expenses	23,214	23,413
Interest and similar expenses	7,185	9,059
Taxes on income and earnings	4,726	1,737
Other taxes	49	54
Total	**449,256**	**397,645**

Management report for the fiscal year 2020

The cost of purchased services mainly includes work contracts and other services, temporary employment, energy costs, maintenance, and cleaning and security services.

Personnel costs include all wages and salaries, social security contributions, and costs for pension schemes.

The €23.214 million (previous year €23.413 million) in other operating expenses mainly comprise general administrative expenses, including rental costs, expert opinion and external consulting services, incidental personnel expenses, and fees relating to nuclear supervision.

Assets and financial situation

The total assets increased by €8.479 million compared to the previous year and now amount to €127.176 million (previous year €118.697 million). This is mainly attributable to the increase in receivables from the shareholder for provisions that have yet to become effective as well as trade payables as of the balance sheet date.

The fixed assets of €5.113 (previous year €5.623 million) are attributable exclusively to financial assets.

Current assets mainly comprise receivables from the shareholder amounting to €111.000 million (previous year €103.030 million) and advance payments made to contractors (€5.840 million; previous year €3.905 million).

Cash on hand was increased as part of the COVID-19 precautionary measures in agreement with the shareholder.

On the liabilities side, current assets are mainly offset by debt capital in the form of project-related trade payables and provisions.

The provisions increased to €67.306 million (previous year €59.784 million) and result from the following: Pension provisions and similar obligations (€16.404 million; previous year €15.771 million), outstanding invoices (€20.049 million; previous year €19.064 million), procedural costs for closing the Morsleben repository for radioactive waste (€7.368 million; previous year €7.609 million) and for decommissioning the Asse II mine (€3.556 million; previous year €3.408 million), VAT risks (€11.833 million; previous year €5.800 million), personnel obligations (€6.634 million; previous year €7.062 million), income taxes (€1.389 million; previous year €1.021 million), and financial statement costs (€73,000; previous year €49,000).

Within liabilities (€54.869 million; previous year €54.109 million), trade payables predominate at €35.302 million (previous year €34.941 million). Other liabilities (€15.567 million; previous year €14.757 million) essentially comprise value-added tax (VAT) and wage tax payable. Another €4.000 million (previous year €4.410 million) was recognised for liabilities to the shareholder and the subsidiary.

Equity increased due to the distribution booked in 2020 by BGE TEC, from €4.804 million by €197,000 to €5.001 million. The equity ratio is 3.9% (previous year 4.0%).

The financial situation is secured at all times through financing from federal budget funds in the scope of the commissioning by the shareholder. For this reason, separate lines of credit from banks are not required and are therefore not held.

Personnel and social report

Some of the visible effects of the COVID-19 pandemic are that certain training measures for continuing staff development could not be held in the classroom as usual, or had to be dropped altogether due to cancellation by the providers. Focus also had to be placed on supporting and participating in job interviews, which could only be conducted via Skype.

As of 31 December 2020, BGE had a total of 2,092 employees working at eight locations, divided into 1,915 company employees (annual average 1,798), 94 BfS-appointed civil servants and public sector employees, and 83 temporary workers. A total of 53 trainees were in its employ at the end of the year.

Because the number of employees permanently exceeds 2,000, the supervisory board will reconstitute itself in 2021.

In 2020, in response to job advertisements, 16 temporary workers were taken on, most in fixed-term contracts; 153 formerly temporary employees were made permanent. As of 31/12/2020, there were a total of 192 fixed-term contracts.

The concept introduced in 2019 for transferring interested BfS civil servants to BGE was implemented in 2020; accordingly, BGE transferred 20 BfS employees, covered by collective agreements, to its own staff.

On the basis of the Equalisation Plan that came into force in 2020, the Equal Opportunities Officer and Representatives were appointed on 1 January 2021. In order to certify its family friendliness, BGE had itself subjected to an audit, which is to be concluded in 2021. As of the balance sheet date, six of the fourteen seats on the BGE supervisory board are held by women (42.9 %). The proportion of women on the management board is 25%. According to the BGE Equalisation Plan, the quota of women at management level will reach 30% by the end of 2023. At the end of 2020, this quota was 20.1%.

Concepts for new, additional human resources tools were developed based on the competence model, for example a new recruiting and job advertising process with a selection matrix and interview guidelines.

To improve the marketing of apprenticeships, short films were commissioned to advertise the professions offered in the region.

With regard to an integrated HR management system using SAP HCM, key milestones were achieved in 2020 with the creation of a concept and the drafting of a central works agreement (Gesamtbetriebsvereinbarung, GBV). The concept is to be implemented in 2021, so that the integrated processes can go live in 2022.

We also negotiated and concluded further important works agreements and central works agreements with the works councils.

Management report for the fiscal year 2020

Training and continuing education

In 2020, as part of the internal measures for continuing education, 2,416 training courses were organised for the company, serving essentially to maintain or develop/expand the expertise and qualifications of the employees. Three employees successfully became state-certified technicians during the reporting period. As of 31 December 2020, there were 53 trainees employed at four locations. 14 trainees passed their final exams, 10 of whom were taken on as temporary employees and four as permanent employees.

Occupational health and safety

The COVID-19 pandemic has caused a series of changes and impacts throughout the entire company since the spring of 2020. The measures for employee protection introduced in the first quarter of the year were maintained until the end of the year under the leadership of the management and the superordinate BGE crisis team, or were revised and updated as necessary. All within a very short time, decisions were finalised on the operation of the mine and office sites, hygiene materials were procured, and the necessary IT solutions and hardware were provided so that more people could use the opportunities for mobile working.

Communicating measures and hygiene regulations to employees and developing and continually updating a new body of rules for coping with the COVID-19 pandemic were and remain key activities. In addition, a crisis hotline was set up for employees and "Corona consultation hours" were offered. Overall, BGE could record a comparatively mild course at the end of the year, with 22 cases of COVID-19 including 18 recovered, having been able to largely prevent infection at the workplace through precautionary measures. The COVID-19 pandemic is still affecting the work of BGE in 2021 to varying degrees. Nevertheless, BGE will endeavour to continue its operations to the best of its ability under the given conditions.

The audit by the German Employers' Liability Insurance Association for Raw Materials and the Chemical Industry (BG RCI) for the award of the seal of quality "Sicher mit System" ("Safe with System"), attesting to the effectiveness of BGE's occupational health and safety management, was successfully completed. Four sites (Asse, Berlin, Gorleben, and Peine) were audited. The award of the seal of quality is expected in the course of the first quarter of 2021.

The Occupational Health Care Service was set up centrally in Peine. An integrated concept is being developed for occupational health care for all of BGE.

The main goals and measures specified by the Safety Steering Committee were implemented, and measures were offered for promoting health at work.

In the fiscal year, 11 reportable accidents occurred. Efforts are continuing in 2021 to further reduce the number of accidents.

Asse mine: The man-haulage bridge provides draught-free passage from the pithead to the shaft

Management report for the fiscal year 2020

Forecast, opportunity and risk report

Opportunity and risk report

Internal reporting and comprehensive controlling ensure that the management is promptly informed of potential opportunities and risks and can swiftly initiate appropriate countermeasures.

There are no existential financial risks for BGE, since the costs of economic management are reimbursed by the BMU upon notification of resource requirements through the call-for-funds procedure. The BMU reimburses the costs incurred at cost price.

In the fourth quarter of 2020, the existing risk management instruments were converted to a uniform corporate risk management system based on DIN ISO 31000 and the guidelines for major construction projects of the Federal Ministry of Transport and Digital Infrastructure. This ensures that the relevant risks and opportunities of all corporate divisions will be recorded and evaluated in a uniform system in the future.

Thus, in 2021, the effectiveness of the management measures will also be monitored cyclically by this new system and controlled in quarterly risk committee meetings across the board.

Forecast report

Regarding the forecast costs, please refer to the table in the 'Control system' section.

General

As corporate development, the streamlining of internal processes and the expansion of control instruments will be continued. The processes will be modelled, centrally recorded, and mapped in order to make them highly available as complete documentation of the management system.

The digitisation projects are being continued.

The administration building in Peine and the associated land in Eschenstraße have been acquired. Various concepts for workplace development are in consideration. The planning for the extension to the main building in Peine will continue, with the aim of creating premises for up to 150 workplaces. The photovoltaic system on the roof of the existing building will be brought into operation. The installation of charging points and the procurement of e-vehicles for the sites' fleets, which began in 2020, will continue.

The internet presence and social media channels will be updated. The website will be expanded and an employee app prepared for introduction. An Infomobile and a trade fair stand are to be procured to support external events and trade fairs.

The integrated data management system will be successively introduced into the entire company and the digital knowledge archive established.

The IT security concept will be updated, the company-wide Wi-Fi availability expanded, and the IT security components improved.

Construction of the Konrad repository

In the Konrad project, construction will start in 2021 at the Konrad 1 mine for the guard building, the heating centre, and the workshop building with filling station.

The activities in Konrad Shaft 1 (conversion of the shaft hoisting system Konrad 1 North) are continuing. The shaft qualification measures will be continued.

At Konrad Shaft 2, the planning services and processes under nuclear law and building law will be continued. Construction work on the depot and the mine water transfer station will continue. Construction of the fan building is also scheduled to begin. The reloading hall will be awarded after successful preliminary examination pursuant to nuclear law.

In Konrad Shaft 2, the level excavation will be completed in the filling site on the second level.

In the pit, the infrastructure rooms of the repository are still being constructed at several operating points. The expansion of the pit side rooms is continuing, among other things, with the installation of the inner shells.

The procurement, manufacture, and assembly of the vehicles for emplacement operation and the mechanical equipment are continuing.

Decommissioning of the Asse II mine

The exploration works for the new recovery shaft and the retrieval mine are scheduled to be completed in 2021. This includes the remaining drilling below and above ground as well as the evaluation of the data from the seismic measurements. The location of the new recovery shaft must be decided.

The plans for the retrieval mine, the retrieval technology, and the facilities and equipment for treating the retrieved radioactive waste are being detailed.

The operational areas required for retrieval will be acquired. The infrastructure for retrieval will be integrated into the spatial planning of the Braunschweig Regional Association and, on a higher level, into the spatial planning of the State of Lower Saxony.

The technical and organisational precautionary measures for the emergency plans will be continued. This includes design improvements and maintaining the functionality of the solution management system, backfilling of roadways and selected mine rooms, and sealing and stabilisation measures. In addition, trial operation of the reception point for a counter-flooding solution will be completed and the facility commissioned in 2021. This liquid will come into use if there is ever a beyond-design ingress of solution. For this purpose, it is planned to commission a contractor for providing the counter-flood solution.

Morsleben repository

Further measures are to be taken in preparation, for closing the Morsleben radioactive waste repository. For example, the upgrading of the Marie shaft hoisting system is to be prepared. Procedural documents for the closure are being finalised in the licence planning phase. Proof of the sealing of the southern ventilation shaft is being finalised. Work relating to the safety concept and the methodological procedure for the phase after closing the repository is being finalised.

Management report for the fiscal year 2020

Gorleben

In Gorleben, the measures foreseen in the current mining law-compliant operating plan are being completed.

The measures to be defined after the elimination of the Gorleben-Rambow salt structure from the site selection procedure are still being planned.

Site selection procedure

Focus in 2021 will be on accompanying the sub-areas conference, evaluating the respective outcomes of this conference, and the preparatory work for identifying siting regions.

Work will continue on publishing decision-relevant data in accordance with the Geological Data Act. Appropriate methods are being developed and pilot applications are being run for implementing the representative preliminary safety investigations.

This is being done in continuous communication with the Federal Office for the Safety of Nuclear Waste Disposal (BASE) to ensure conformity with the Site Selection Act (StandAG), the Repository Safety Investigation Ordinance (EndlSiUntV), and the Repository Safety Requirement Ordinance (EndlSiAnfV). The presentation of a validated method for conducting the representative preliminary safety investigations is decisive for scheduling the implementation of § 14 StandAG.

Further focal points are the development of the method for applying the geoscientific consideration criteria, which were already applied in the process, and the development and piloting of a method for applying the planning-scientific consideration criteria. With the proposal for the siting regions, site-specific exploration programmes for the surface exploration in the site selection procedure are also to be submitted in accordance with § 16 StandAG. Corresponding handling concepts for preparing these exploration programmes will be developed in 2021.

Furthermore, ongoing R&D projects and memberships will continue and new projects will be initiated.

Quality assurance measures

Based on the annual planning carried out with the applicants, Quality Assurance expects a further increase in quality assurance measures in 2021. The necessary personnel resources will be established to work off the application processes.

Other goals for 2021 are the maintenance and continued development of the approval request management system and the introduction of a schedule of costs.

Regarding the introduction of a digital approval request management system, the so-called "Nuclear Waste Logistics" system will be established. The requirements profile for the digital platform is to be developed by April 2021. Work on digitising the inventory documentation is planned to be intensified. This should be completed by December 2022.

Peine, 31 March 2021

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Chairman of the Management Board

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Deputy Chairman of the Management Board

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Morsleben repository: 3rd level, Excavation 1 South for material tests

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As of: June 2021

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Design: BUSCHBRAND grafikdesign
Print: Gutenberg Beuys Feindruckerei GmbH
Photography: Christian Bierwagen, BGE, Dr. Jan-Hendrik Kamlage

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